



PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
(Case No. 00-888-J (236/244))

In the Application of:)	
)	
Sullenger et al.)	
)	Examiner: Jeffrey Fredman
Serial No.: 09/165,514)	
)	Group Art Unit: 1634
Filing Date: October 2, 1998)	
)	
For: Alteration of Sequence of a Target)	
Molecule by Ribozyme Catalyzed)	
Trans-splicing)	

SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

Dear Sir:

Pursuant to 37 C.F.R. Section 1.97 - 1.99, the Applicant wishes to make the following references of record in the above-identified application. This Supplemental Information Disclosure Statement is in compliance with the continuing duty of candor as set forth in 37 C.F.R. Section 1.56. Copies of the cited references are enclosed. These references are also listed on the enclosed PTO Form 1449.

Applicants enclose the fee of \$180.00 pursuant to 37 C.F.R. 1.17(p) for this filing. The Commissioner is hereby authorized to charge or credit Deposit Account Number 13-2490 for any under- or over-payment of fees associated with the papers transmitted herewith, or to credit any overpayment of same.

U. S. PATENT APPLICATION DOCUMENTS

1. Sullenger et al., U.S. Patent Application No. 08/152,450, filed November 12, 1993

U.S. PATENTS

2. Robertson et al., U.S. Patent No. 5,225,337, issued July 6, 1993
3. Taylor et al., U.S. Patent No. 5,389,514, issued February 15, 1995
4. Sullenger et al., U.S. Patent No. 5,869,254, issued February 9, 1999

OTHER DOCUMENTS

5. Been and Cech, "One Binding Site Determines Sequence Specificity of Tetrahymena Pre-rRNA Self-Splicing, Trans-Splicing and RNA Enzyme Activity," Cell 47:207-216 (1986)
6. Cech, "Ribozyme Engineering," Current Opinion in Structural Biology 2:605-609 (1992)
7. Dzierzak et al., "Lineage-specific expression of a human β -globin gene in murine bone marrow transplant recipients reconstituted with retrovirus-transduced stem cells," *Nature*, 331, 35-41 (1989)
8. Inoue et al., "Intermolecular Exon Ligation of the rRNA Precursor of Tetrahymena: Oligonucleotides Can Function as a 5' Exons," Cell 43:431-437 (1985)
9. Konarska et al., "Trans Splicing of mRNA Precursors in Vitro," *Cell* 42:165-171 (1985)
10. Kruger et al., "Self-Splicing RNA: Autoexcision and Autocyclization of the Ribosomal RNA Intervening Sequence of Tetrahymena," Cell 31:147-157 (1982)
11. Malim, et al., "functional Dissection of the HIV-1 Rev Trans-Activator – Derivation of a Trans-Dominant Repressor of Rev Function," *Cell*, 58, 205-214 (1989)
12. Morgan and Anderson, "Human Gene Therapy," Annu. Rev. Biochem. 62:191-217 (1993)


13. Murphy and Cech, "Alteration of Substrate Specificity for the Endoribonucleolytic Cleavage of RNA by the Tetrahymena Ribozyme," Proc. Natl. Acad. Sci. USA 86:9218-9222 (1989)
14. Price and Cech, "Coupling of *Tetrahymena* Ribosomal RNA Splicing to β -Galactosidase Expression in *Escherichia coli*," Science 228:719-722 (1985)
15. Price, et al., "Determinants of the 3' splice site for self-splicing of the *Tetrahymena* pre-rRNA," *Genes and Development*, 2, 1439-1447 (1988)
16. Sarver et al., "Ribozymes as Potential Anti-HIV-1 Therapeutic Agents" Science 247:1222-1225 (1990)
17. Smith et al., "Development of a *lacZ* Marked WEHI-3B D⁺ Murine Leukemic Cell Line as an *In-Vivo* Model for Active Non-Lymphocytic Leukemia," *Leukemia*, 7, 310-317 (1993)
18. Solnick, "Trans Splicing of mRNA Precursors," *Cell* 42:157-164 (1985)
19. Sullenger et al., "Overexpression of TAR Sequences Renders Cells Resistant to Human Immunodeficiency Virus Replication," Cell 63:601-608 (1990)
20. Trono et al., "HIV-1 Gag Mutants Can Dominantly Interfere with e Replication of the Wild-Type Virus," *Cell*, 59, 113-120 (1989)
21. Tsuchihashi et al., "Protein Enhancement of Hammerhead Ribozyme Catalysis," Science 262:99-102 (1993)
22. van der Veen et al., "Excised Group II Introns in Yeast Mitochondria are Lariats and Can Be Formed by Self-splicing In Vitro," Cell 44:225-234 (1986)
23. Waring et al., "The *Tetrahymena* rRNA Intron Self-Splices in *E. Coli*: In Vivo Evidence for the Importance of Key Base-Paired Regions of RNA for RNA Enzyme Function," Cell 40:371-380 (1985)
24. Weber et al., "Antiviral properties of a dominant negative mutant of the herpes simplex virus type 1 regulatory protein ICP0," *Journal of General Virology* 73:2955-2961 (1992)

25. Zaug and Cech, "The Intervening Sequence RNA of *Tetrahymena* Is a Enzyme," Science 231:470-475 (1986)
26. Zaug et al., "The *Tetrahymena* Ribozyme Acts Like an RNA Restriction Endonuclease," Nature 324:429-433 (1986)

Respectfully submitted,
McDonnell Boehnen Hulbert & Berghoff

Date: June 17, 2003

By:


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U.S. PATENT APPLICATION DOCUMENTS

Examiner Initial		Document Number	Filing Date	Name	Class	Subclass	Publication Date if Appropriate
	1.	08/152,450	11/12/93	Sullenger et al.			

U.S. PATENT DOCUMENTS

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	2.	5,225,337	07/06/93	Robertson			
	3.	5,389,514	02/15/95	Taylor			
	4.	5,869,254	02/09/99	Sullenger			

06/20/2003 WASFAW1 00000126 09165514

01 FC:1806

180.00 DP

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc).

5.	Been and Cech, "One Binding Site Determines Sequence Specificity of Tetrahymena Pre-rRNA Self-Splicing, Trans-Splicing and RNA Enzyme Activity," <u>Cell</u> 47:207-216 (1986)
6.	Cech, "Ribozyme Engineering," <u>Current Opinion in Structural Biology</u> 2:605-609 (1992)
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9.	Konarska et al., "Trans Splicing of mRNA Precursors in Vitro," <i>Cell</i> 42:165-171 (1985)
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